

DAACs and Science Operations

SWAMP

April 4, 1997

Current DAAC Activities

- **Operational Data Management and User Services (data ingest, product generation, archive, catalog, distribution, user support):**
 - **Over 20,000 distinct users in CY1996**
 - **Just over 2,000,000 products, 44TB of data delivered**
 - **676 Version 0 data sets and a variety of tailored products available to users**
 - **Tailored products, designed to meet user needs and facilitate network access, include pre-packaged subsets, reformatted data sets, new derived products**
 - » **GSFC DAAC: Interdisciplinary Data Collection - 60 geophysical parameters mapped to a common base**
 - » **JPL DAAC : on-line subsetting of Sea Surface Temperature data**
 - » **NSIDC DAAC: Sea Ice Motion computed from a combination of satellite and buoy data**

Current DAAC Activities

- **EDC, GSFC, LaRC, NSIDC DAACs working with AM-1, SAGE-3 Instrument Teams, early SSI&T activities, preparing for Pre-Release B Test Bed, and for ECS B.0 and B.1 to follow.**
- **GSFC and LaRC DAACs Implementing TRMM Systems - more information to follow.**
- **JPL DAAC supporting NSCAT mission, preparing for SeaWinds and Jason (both in 1999).**
- **ORNL producing new Net Primary Productivity global data base product, and is supporting BOREAS and Amazon Basin field campaigns**
- **MSFC DAAC Closed March 31, 1997**
 - **“DAAC” functions for AM-1 LIS and related data to be UAH/GHRC, which is:**
 - **Global Hydrology Resource Center, data management and user services arm of the Global Hydrology and Climate Center, University of Alabama Huntsville**
 - **Other former MSFC DAAC data sets now available from other DAACs or NOAA/NESDIS**

EOSDIS TRMM / CERES Data Systems

- **GSFC and LaRC DAACs Given TRMM / CERES Responsibility:**
 - Focused ECS Effort on AM-1, SAGE, Landsat-7
 - Elevated TRMM / CERES Backup effort begun in November, 1996, to be primary system for supporting TRMM mission
 - GSFC and LaRC DAAC Systems sized and planned for three year TRMM mission plus one year of post mission reprocessing and data migration to ECS - assuming November 1, 1997 TRMM launch
- **Implementation Approach - Elements Common to Both DAACs:**
 - Build on proven Version 0 capabilities, existing operational system and experienced, dedicated staff
 - Work closely with immediate clients - TRMM/TSDIS for GSFC DAAC and CERES Team for LaRC DAAC - ensure their critical needs are met, support TRMM mission tests
 - Rely on Version 0 catalog and distribution capabilities to support general community, provide interoperability via Version 0 IMS
 - ESDIS Project maintains oversight, but these efforts are being managed and carried out by the GSFC and LaRC DAACs.
 - Both DAACs know what they need to do, and are doing it.

GSFC DAAC TRMM Support System (TSS)

- **Support TRMM Science Team at launch, community access at Launch + 6 months (when TRMM Project releases reprocessed science products from TRMM instruments)**
- **Requirements coordinated with TRMM Project science team and TSDIS**
- **System is essentially a separate clone of Version 0 archive, catalog, and distribution system, scaled to meet TRMM requirements**
- **Modified Version 0 software running on SGI Origin 2000 platform, Storage Tech near-line archive**
- **Active interface with TSDIS for TRMM instrument data and products**
- **Key Milestones:**
 - **Successful design review held Jan 23, 1997**
 - **Initial system release July 5, update release to implement bug fixes, etc., Sept 15**
 - **Launch Readiness Review Sept 25, 1997**
 - **Post-Launch Release to support community access to TRMM data - May 1, 1998**

GSFC DAAC TRMM Support System (TSS)

Current Status

- **New hardware, COTS software in procurement -**
 - **SGI Origin (IRIX 6.4), STK storage subsystem configuration due in early May, Oracle for Origin just received**
 - **DAAC working now with SGI Challenge (IRIX 6.2), loaner STK system (courtesy of ECS)**
- **Integration of pre-launch release software began on schedule, March 25**
- **Interface testing with TRMM / TSDIS in progress**
- **DAAC will support SIM-2 test in late April, port to new hardware configuration in May**
- **Risks - delay in completion of acceptance testing due to delay in delivery of SGI and STK hardware/software, and then possible difficulty in porting to new system.**

LaRC DAAC - LaRC TRMM Information System (LaTIS)

- **Support CERES Science Team at launch, community access at Launch + about 4 months (when CERES team releases reprocessed CERES science products)**
- **Requirements coordinated with CERES Instrument Team**
- **LaTIS is a new CERES product generation capability and expanded archive, interfaced to DAAC's Version 0 catalog and distribution system**
- **SCF Toolkit, CERES science software, COTS production planning/scheduling tool, running on SGI Origin 2000 platform, Storage Tech near-line archive**
- **Active interface with GSFC/SDPF for TRMM instrument data**
- **Key Milestones:**
 - **Successful design review held Jan 31, 1997**
 - **First release April 1, ingest and archive, limited product generation; Second release Sept 1, cataloging and expanded product generation**
 - **Launch Readiness Review Sept 23, 1997**
 - **Post-Launch Release to support community access to TRMM data - May 1, 1998**

LaRC DAAC - LaRC TRMM Information System (LaTIS) - Current Status

- **Problems with COTS and Vendors nag the effort...**
 - **SGI Origin Workstations installed, but a month late, new “Data Vault” not yet received, but using 100GB disk - SGI provided a loaner Challenge as interim platform**
 - **AMASS port to Origin, IRIX 6.4 promised for April**
 - **Informix resisting the opportunity to demonstrate the excellence of their new IUS product in a NASA environment - silly prices, silly terms.**
 - **ECS is cooperating with DPREP software and COTS licenses**
- **DAAC has implemented a Challenge-based system to support early development and testing**
 - **Runs 8 R10000 CPUs, AMASS, Informix, Compilers**
 - **Runs CONSIM program for SDPF interface, SCF Toolkit, CERES PGE**
 - **All work on the interim platform is on schedule, Release 1 ready to support SIM-2 test in late April**
- **Risk - Delays in Resolving the COTS problems, especially AMASS on Origin, moving to the final COTS configuration**